CLAIM AMENDMENTS

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Original) A media sensor for sensing media in the media path of an image forming apparatus, comprising:

   an optical source;

   an optical detector disposed in a spaced relationship with said optical source, said source and detector both disposed on a first side of said media path;

   an optical barrier disposed between said optical source and said optical detector; and

   at least one reflective surface disposed on a second side of said media path, said reflective surface(s) positioned to reflect optical energy from said optical source to said optical detector;

   wherein said sensor is operative to distinguish between no media, opaque media, and transparent media in said media path by detecting a level of optical energy in the case of transparent media that is between that in cases of opaque media and no media present.

10. (Original) The sensor of claim 9 wherein a readily detectable amount or optical energy from said source reaches said detector when no media is present in said media path,

little or no optical energy from said source reaches said detector when opaque media is present in said media path, and a level of optical energy from said source between the cases of opaque media and no media reaches said detector when transparent media is present in said media path.

11. (Original) The sensor of claim 10 wherein the optical energy received by said optical detector when transparent media is present in said media path is about 80% of the optical energy received when no media is present.

12. (Original) The sensor of claim 10 wherein said sensor is operative to separately detect a leading edge and a trailing edge of a media sheet.

13. (Original) The sensor of claim 9 wherein said optical barrier is operative to block substantially all optical energy reflected from said optical source by media in said media path from reaching said detector.

14. (Original) The sensor of claim 9 further comprising a sensor body, and wherein said optical source, said optical detector, and said optical barrier are disposed in said sensor body.

15. (Original) The sensor of claim 14 wherein said optical source and said optical detector are disposed at acute, non-zero angles from a direction normal to said media path.

16. (Original) The sensor of claim 15 wherein said optical source and said optical detector are disposed at substantially the same angle with respect to a direction normal to said media path.

17. (Original) The sensor of claim 15 wherein said optical source and said optical detector are disposed at substantially opposite angles with respect to a direction normal to said media path.

18. (Original) The sensor of claim 14 wherein said sensor body is disposed at an acute angle from a direction normal to the plane of said media path.

19. (Original) The sensor of claim 9 wherein said optical energy from said optical source to said optical detector is reflected once in the case of no media or transparent media in said media path.

20. (Original) The sensor of claim 9 wherein said optical energy from said optical source to said optical detector is reflected twice in the case of no media or transparent media in said media path.

21. (Original) The sensor of claim 9 wherein said optical energy is infrared.

22. (Original) The sensor of claim 9 wherein said optical source is selected from the group including an LED, a laser diode, and an incandescent lamp.

23. (Original) The sensor of claim 9 wherein said optical source is selected from the group including a phototransistor and a photodiode.

24. (Original) The sensor of claim 9 wherein said at least one reflective surface disposed on a second side of said media path is integral to a media guide comprising said media path.

25. (Original) The sensor of claim 9 wherein said optical source disposed at an angle with respect to a direction normal to said media path in the range from about 5 degrees to about 40 degrees.

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (Canceled)

33. (Canceled)

34. (Currently Amended) A method of detecting the presence and type of media in the media path of an image forming apparatus, comprising:

directing optical energy from an optical source ~~disposed at an acute, non-zero angle with respect to a direction normal to said media path,~~ to an optical detector;

directing said optical energy through at least two distinct locations along said media path;

reflecting said optical energy off at least two reflective surfaces;

detecting and quantifying optical energy from said optical source at said optical detector; and

in response to detecting and quantifying said optical energy at said detector, determining whether no media, opaque media, or transparent media is present in said media path by detecting a level of optical energy in the case of transparent media that is between that in cases of opaque media and no media present.

35. (Original) The method of claim 34 wherein determining that no media is present in said media path comprises detecting a readily detectable amount of the optical energy from said source at said detector.

36. (Original) The method of claim 34 wherein determining that opaque media is present in said media path comprises detecting little or no optical energy from said source at said detector.

37. (Original) The method of claim 34 wherein determining that transparent media is present in said media path comprises detecting a level of optical energy from said source between the cases of opaque media and no media reaches said detector when transparent media is present in said media path.

38. (Currently Amended) The method of claim 34 wherein the steps of directing optical energy from said optical source to said optical detector ~~comprises~~ and detecting and

quantifying optical energy from said optical source at said optical detector respectively comprise directing and receiving optical energy ~~from said optical source disposed on one side of said media path, through said media path, to said detector disposed on the other side of said media path~~ at substantially equal, but opposite angles with respect to a direction normal to said media path.

39. (Currently amended) The method of claim 34 wherein directing optical energy from said optical source to said optical detector comprises directing optical energy from said optical source disposed on a first side of said media path, through said media path a first time, to said at least ~~one reflective surface~~ two reflective surfaces disposed on a second side of said media path, through said media path a second time, to said detector disposed on said first side of said media path.

40. (Original) The method of claim 34 further comprising:

determining the length of a media sheet by measuring the elapsed time between sensing the leading edge of said media sheet and sensing the trailing edge of said media sheet, and multiplying said elapsed time by a known speed of said media sheet.

41. (Currently Amended) A media sensor outputting a signal indicative of the presence and type of media in the media path of an image forming apparatus, comprising:

an optical source emitting light; and

an optical detector disposed to receive said light and outputting said signal proportionate to an energy level of said received light;

at least two reflective surfaces disposed to reflect light emitted by said optical source toward said optical detector;

wherein the path of said light from said source to said detector crosses said media path at least ~~once~~ twice; and

wherein said output signal indicates opaque media in said media path by a first output level, said output signal indicates no media in said media path by a second output level, and said output signal indicates transparent media in said media path by an output level intermediate said first and second levels.

42. (Original) The sensor of claim 41 wherein said energy level of said received light in the case of transparent media is about 80% of said energy level of said received light in the case of no media.

43. (Original) The sensor of claim 41 wherein said emitted light is infrared.

44. (Original) The sensor of claim 41 wherein said optical source is disposed at an acute, non-zero angle from a direction normal to said media path.

45. (New) The sensor of claim 41 wherein said optical source and said optical detector are disposed on a first side of said media path and said at least two reflective surfaces are disposed on a second side of said media path.

46. (New) The sensor of claim 41 wherein said at least two reflective surfaces form a corner cube retro reflector.

47. (New) The sensor of claim 41 wherein said at least two reflective surfaces are disposed at substantially equal, but opposite angles relative to a direction normal to said media path.

48. (New) The sensor of claim 41 wherein said optical source and said optical detector are disposed at substantially equal, but opposite angles relative to a direction normal to said media path.